BACK TO BASICS

Over-the-Counter

Randall Dodd

FINANCIAL markets are complex organizations with their own economic and institutional structures that play a critical role in determining how prices are established, or "discovered." These factors also shape the stability and orderliness of the marketplace. As holders of subprime collateralized debt obligations (CDOs) and some derivatives have found out in the months following the August 2007 onset of the current turmoil, some types of markets can very quickly become unstable, disorderly, or otherwise dysfunctional.

There are two basic ways to organize financial markets—exchange and over the counter (OTC)—although some recent electronic facilities blur the traditional distinctions.

Trading on an exchange

Exchanges, whether stock markets or derivatives exchanges, started as places where trading takes place. The best known is the New York Stock Exchange (NYSE). The Chicago Board of Trade has been trading futures contracts since 1851, and its recent merger with its longtime rival, the Chicago Mercantile Exchange, has created the largest derivatives exchange in the world. There are more than 100 stock and derivatives exchanges throughout the developed and developing world.

But exchanges are more than physical locations. They set the institutional rules that govern trading and provide the information conduits and clearing facilities through which trading occurs and post-trading activities are completed. An exchange centralizes the communication of bid and offer prices to all market participants, who can respond by selling or buying at one of the quotes or by replying with a different quote. Depending on the exchange, the medium of communication can be voice, hand signal, or electronic message. When two parties reach agreement, the price at which the transaction is executed is communicated throughout the market. The result is a level playing field that allows any market participant to buy as low or sell as high as anyone else as long as the trader follows exchange rules.

The advent of electronic trading has meant that exchanges don't have to be physical places. Indeed, many traditional trading floors are being closed, and the communication of orders and executions are conducted entirely electronically. The London Stock Exchange and NASDAQ stock exchange are completely electronic, as is Eurex, the world's second largest futures exchange. Many others, as they phase out floor trading, offer both floor and electronic trading. The NYSE bought the electronic trading platform Archipelago as it moves increasingly toward electronic trading. Derivatives exchanges such as Brazil's BM&F and the CME Group maintain both pits and electronic trading.

Trading over the counter

Unlike exchanges, OTC markets have never been "places." They are less formal, although often well-organized, networks of trading relationships centered on one or more dealers. Dealers act as market makers by quoting prices at which they will sell (ask) or buy (bid) to other dealers and to their clients or customers. That does not mean they quote the same prices to other dealers as they post to customers, and they do not necessarily quote the same prices to all customers. Moreover, dealers in an OTC security can withdraw from making a market, causing liquidity—the ability to buy or sell a security—to dry up. In short, OTC markets are less transparent and operate with fewer rules than do exchanges. All of the securities and derivatives involved in the current financial crisis were traded in OTC markets.

OTC dealers convey their bid and ask quotes and negotiate execution prices over the telephone and, increasingly, through instant messaging, although the process is often enhanced through the use of electronic bulletin boards where dealers post their quotes. The process of negotiating by phone, whether customer-to-dealer or dealer-to-dealer, is known as bilateral trading because only the two market participants directly observe the quotes or execution. Others in the market are not privy to the trade, although some brokered markets post execution prices and the size of the trade. But not everyone has access to the broker screens and not everyone in the market can trade at that price. Although the bilateral negotiation process is often highly automated, the trading arrangement is not considered an exchange because it is not open to all participants equally.

There are essentially two dimensions to OTC markets. In the ***customer market***, bilateral trading occurs between dealers and their customers, such as individuals or hedge funds. In the ***interdealer market***, dealers quote prices to each other and can quickly lay off to other dealers some of the risks they incur in trading with customers, such as acquiring a bigger position in a security than they want. Dealers can have direct phone lines to other dealers and to their major customers so that a market participant can call up a dealer for a quote, hang up and call another dealer, and then another, surveying several dealers in a few seconds. An investor can make multiple calls to get a view of the market

Markets: What Are They?

on the customer side. But customers cannot penetrate the market among dealers.

Some OTC markets, and especially the interdealer market segments, have price brokers that help market participants get a broader view of the market. The dealers send quotes to the broker, who, in effect, broadcasts the information by telephone. Brokers often provide electronic bulletin boards to give their clients (the dealers) the ability to instantaneously post quotes to every other dealer in the broker's network. The bulletin boards show bid, ask, and, sometimes, execution prices. The broker screens are normally not available to end-customers, who, as a result, are usually not fully informed of changes in prices and the bid-ask spread in the interdealer market. Dealers can sometimes trade through the screen. Otherwise, the screens are merely informative, and the dealer must trade through the broker or call other dealers directly to execute a trade. Dealers can also call the broker and other dealers directly to post quotes and inquire about quotes that are not listed on the brokers' electronic bulletin board screens.

Advances in electronic trading platforms have changed the trading process in many OTC markets, and this has sometimes blurred the distinction between traditional OTC markets and exchanges. In some cases, an electronic brokering platform allows dealers and some nondealers to submit quotes directly to and execute trades directly through an electronic system. This replicates the multilateral trading that is the hallmark of an exchange—but only for direct participants. Unlike an exchange, in which every exchange participant has access, these electronic arrangements can treat participants differently based on, say, their size or credit rating. Moreover, clearing and settlement of trades are still left to the buyer and seller, unlike exchange transactions, in which trades are matched up and guaranteed by the exchange.

OTC markets and the financial crisis

The architecture of OTC markets helps explain why CDOs (which divide the risk of the underlying assets into several slices, each of which is sold separately) and other structured securities faced problems during the current crisis. Credit derivatives, commercial paper, municipal bonds, and securitized student loans also faced problems. All were traded on OTC markets, which were liquid and functioned well during normal times. But they failed to demonstrate resilience to market disturbances and have become illiquid and dysfunctional. That led to two serious complications: the inability to value one's holdings and the inability to trade them.

Without liquid and orderly markets, there is no price discovery process and, in turn, no easy and definitive way to value the securities or derivatives. One of the lingering problems at financial institutions such as commercial banks and investment firms is the difficulty in meeting disclosure and reporting requirements when there are no market prices to use for valuing assets and derivatives positions. Not only are there no market prices, there are often no benchmark prices (which are prices of assets similar to the one being valued). As a result, the assets that were once valued at market price (or at least at a comparable benchmark price) are now imputed from models without adequate data. The increased reliance on such valuations further erodes market confidence because participants are unsure of the value of their own holdings and those of other parties.

"OTC markets are less transparent and operate with fewer rules than do exchanges."

Dealers, facing a crunch on the funding side of their balance sheets and holding an excessive amount of illiquid assets on the other, withdrew from the markets. The jump in volatility made it especially dangerous and expensive to continue to make markets. Without the dealers, there was no trading, especially in securities such as CDOs, municipal bonds, and credit derivatives. With no buyers, investors could not reduce losses by trading out of losing positions, and they could not sell those positions to meet calls to put up more collateral on loans that were financing other holdings. In that way, the illiquidity in OTC markets contributed to the depth and breadth of the financial crisis.

Many of these markets have not returned to normal trading conditions. Central banks have added funds to the market (funding liquidity), but they cannot directly restore the willingness of buyers and sellers to trade securities (trading liquidity). Unless policymakers take steps to improve market-making practices of OTC dealers, it may be a long time before conditions favor a return to the level of trading liquidity that prevailed before the summer of 2007. ■

Randall Dodd is an Advisor in the IMF's Monetary and Capital Markets Department.